REMARKS/ARGUMENTS

In the Office Action mailed December 8, 2003, claims 1-21 were rejected under 35 U.S.C. 112, first paragraph, for a lack of both adequate description and enablement for using the phrase "gene of interest" in claims 1, 4, 5, 6, 7, 10, 11, and 12. These rejections are respectfully traversed in view of the above-noted amendments. Claims 1, 10, 11, and 12 have herein been amended to remove the phrase "of interest" and to specify that the bombarding gene is capable of transforming *Pinus* or *Pinus* interspecies hybrids. Likewise, dependent claims 4, 5, 6, and 7 have herein been amended to remove the superfluous phrases which reference a gene of interest. Support for these amendments is found in the specification and the examples. It is believed that no new matter has been added to the application via these amendments.

It is respectfully submitted that a person of ordinary skill in the art is well aware of which genes are able to transform *Pinus* or *Pinus* interspecies hybrids, and those which are not. Moreover, such knowledge could be gained by a skilled artisan with only a minimum amount of experimentation.

Claims 1-21 also stand rejected for a lack of utility under both 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph. These rejections are respectfully traversed in view of the amendments noted above. It is respectfully submitted that the prior art clearly documents that transgenic plants have utility. Moreover, since a person of ordinary skill in the art would appreciate which genes are able to transform *Pinus* or *Pinus* interspecies hybrids and those which are unable to do so, the genes selected to transform the *Pinus* or *Pinus* interspecies hybrids cells necessarily will result in a transgenic plant having utility (i.e., genes not having utility would not be selected, as such genes would not result in a transgenic plant).

Claims 1-21 stand rejected under 35 U.S.C. 102(b) as being anticipated by Walter et al. (WO 97/01641). The rejection is respectfully traversed.

It is respectfully submitted that one skilled in the art would recognize that the Walter et al. reference teaches a method "for stably inserting foreign genes into conifer cells wherein the cells to be transformed are in an undifferentiated state such that embryos are likely to regenerate

from a single cell" (p. 2, lines 7-9; p. 3, lines 1-2; p. 8, lines 16-18; claim 1). Indeed, the title of the reference is "Stable Transformation Of Undifferentiated Conifer Cells". Walter et al. further teaches that it is preferred that the embryogenic tissue to be transformed is tissue maintained so that it never develops past the 8-cell stage – that is, 0 to 3 division cycles (p. 3, lines 8-9; p. 8, lines 16-18; p. 15, lines 17-18).

In contrast, the applicants teach and claim transgenic conifer plants which are produced from the transformation of differentiated conifer tissues. Specifically, the applicants' teach and claim the particle bombardment of conifer target tissue selected from the group consisting of embryogenic tissue containing pre-stage 3 somatic embryos, pre-stage 3 somatic embryos, pre-stage 3 zygotic embryos, and combinations thereof (claims 1, 10, 11, and 12). The specification teaches (p. 7, paragraph 026) that:

> [026] Because it is difficult to measure the size of very immature differentiated embryos, embryo staging systems have also been used to make the determination of the appropriate developmental stage easier. These staging systems are based on several factors, including various morphological characteristics of the embryo. An embryo staging system proposed by Hakman and von Arnold (1988), which is commonly utilized in the industry, has the following three distinct stages. Stage 1 embryos are small differentiated embryos consisting of an embryonic region of small, densely cytoplasmic region subtended by a suspensor comprised of long, highly vacuolated cells. Stage 2 embryos are further differentiated embryos with a prominent embryonic region that becomes more opaque and assumes a smooth and glossy surface. Stage 3 embryos are further differentiated embryos which show visible cotyledonary primordia. Thus, stage 1 and 2 embryos are at a pre-cotyledonary stage of development, while stage 3 embryos are cotyledonary. As used herein, the term "pre-stage 3 embryo" means a differentiated pre-cotyledonary embryo (i.e., a stage 1 or stage 2 embryo). Although the above three-stage system was first used with somatic embryos of spruce, it is generally applicable to both somatic and zygotic embryos of all conifer species.

Indeed, specific definitions are provided in the specification [see "Pre-stage 3 embryos" (p. 21, paragraph 070), "Stage 1 embryos" (p. 21, paragraph 073), "Stage 2 embryos" (p. 21, paragraph 074), and "Stage 3 embryos" (p. 21, paragraph 075)].

As the court stated in *Schroeder v. Owens-Corning Fiberglass Corp.*, 514 F2d 901, 185 USPQ 723 (1975, CA 9 Cal):

Unless all of the same elements are found in exactly the same situation and united in the same way to perform the identical function in a single prior art reference, there is no anticipation.

It is, therefore, respectfully submitted that one skilled in the art would recognize that the applicants' invention would not be anticipated under 35 U.S.C. 102(b) by Walter et al.'s method of transforming undifferentiated conifer cells.

Therefore, for the reasons stated, it is respectfully submitted that the claimed invention is patentable and that the claims, as amended, are in condition for allowance. Such action by the Examiner is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

No additional fees (other than for the time extension included herein) are believed to be due in connection with the filing of this amendment and response. Should it be determined that additional fees are due and payable, the Commissioner is authorized to charge any required fees or credit any overpayment to the assignee's Deposit Account No. 23-1160.

Respectfully submitted,

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